

**Power Inductor AMNx Series**

**Automotive  
AEC-Q200**

RoHS Compliant  
Halogen Free  
REACH Compliant



- Power Circuit
- Shield
- Wire Wound
- Metal
- Ultra High Current

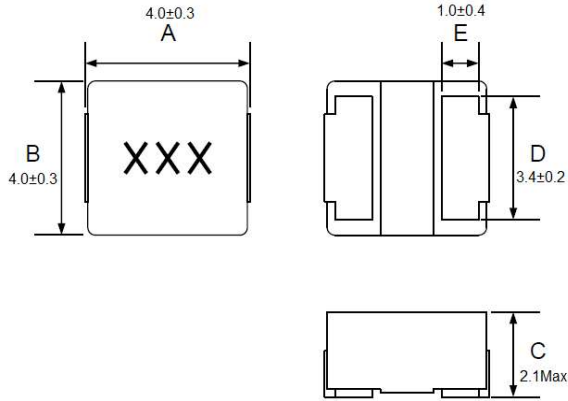
**Part Numbering**

| A     | MNx         | 00           | 040421               | R22             | M         | XB            |
|-------|-------------|--------------|----------------------|-----------------|-----------|---------------|
| Grade | Series Name | Control Code | Dimensions Code (mm) | Inductance (uH) | Tolerance | Internal Code |
|       | MNI         |              | 040421 4.0x4.0x2.1   | R22 0.22        | M ±20%    |               |
|       | MNN         |              | 040431 4.0x4.0x3.1   | R40 0.4         |           |               |
|       |             |              | 050531 5.6x5.5x3.1   |                 |           |               |
|       |             |              | 060631 6.36x6.56x3.1 |                 |           |               |
|       |             |              | 060661 6.36x6.56x6.1 |                 |           |               |
|       |             |              | 070720 7.2x7.5x2.0   |                 |           |               |
|       |             |              | 070731 7.2x7.5x3.1   |                 |           |               |
|       |             |              | 070770 7.2x7.5x7.0   |                 |           |               |

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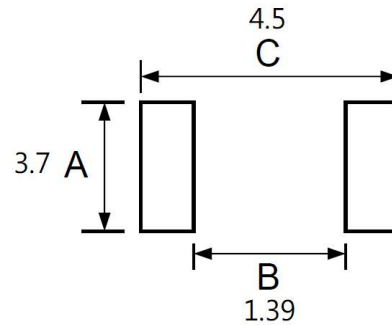
**AMNI00040421 Type**

**Shapes and Dimensions**



unit:mm

**Recommended Land Pattern**



unit:mm

**Electrical Characteristics**

| Part No.           | Inductance (uH) | Test Freq.   | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|--------------|------------------|--------------|--------------|----------------|---------|
| AMNI00040421R22MXB | 0.22            | 100kHz/0.25V | 6.4              | 18.7         | 16.8         | 20             | R22     |
| AMNI00040421R40MXB | 0.4             | 100kHz/0.25V | 8.3              | 12.5         | 14           | 20             | R40     |
| AMNI00040421R60MXB | 0.6             | 100kHz/0.25V | 10.45            | 10.4         | 11.7         | 20             | R60     |
| AMNI00040421R0MXB  | 1               | 100kHz/0.25V | 14.6             | 8.7          | 9.6          | 20             | 1R0     |
| AMNI00040421R5MXB  | 1.5             | 100kHz/0.25V | 23.6             | 7.1          | 7.5          | 20             | 1R5     |
| AMNI00040421R2MXB  | 2.2             | 100kHz/0.25V | 38.7             | 5.6          | 5.5          | 20             | 2R2     |

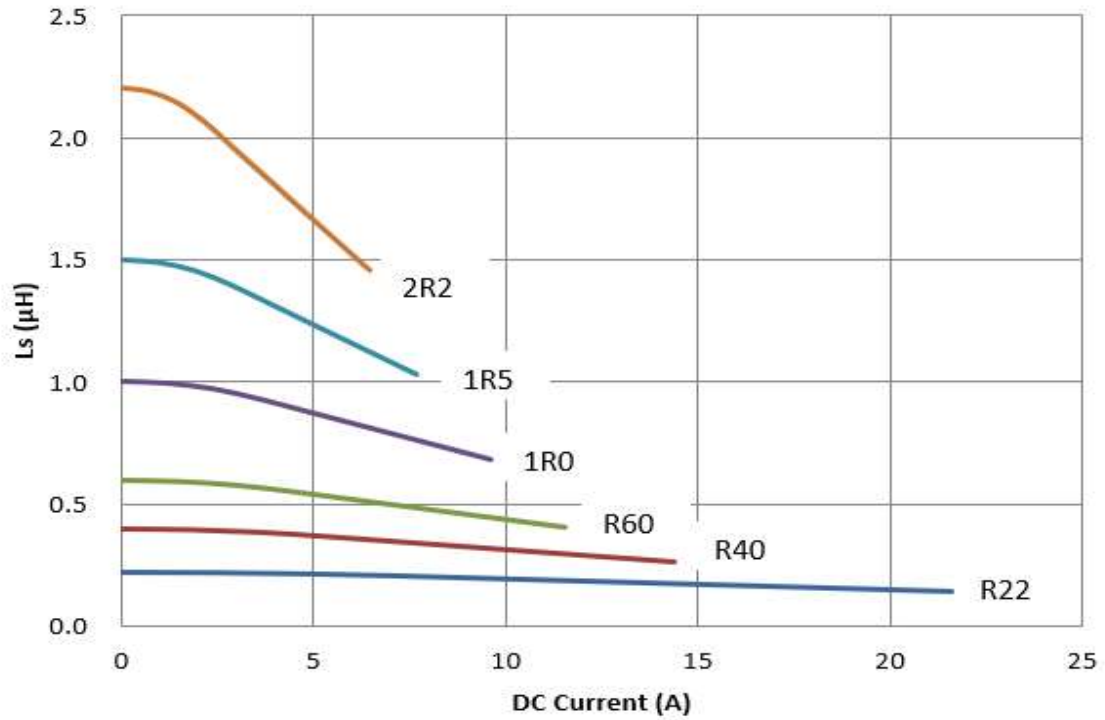
**Note: When ordering, please specify tolerance code. Tolerance: M=±20%**

- Operating temperature range – 55°C~125°C(Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- Iirms for a 40°C temperature rise from 25°C ambient with current

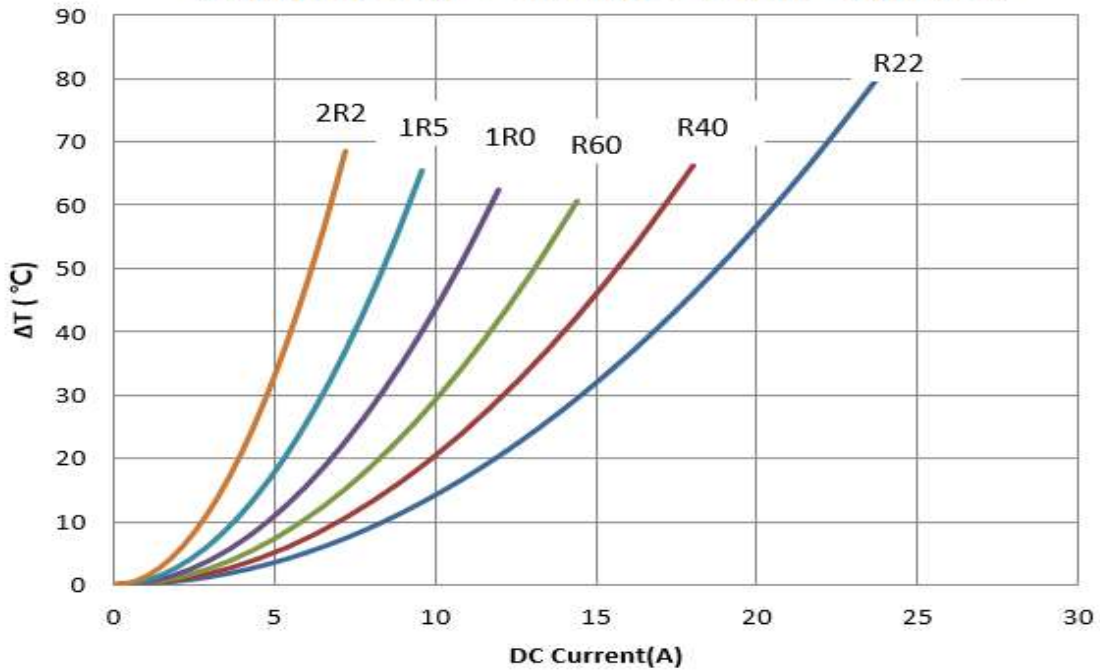
**AMNI00040421 Type**

**Characteristics Graph**

**Inductance vs. DC Current**

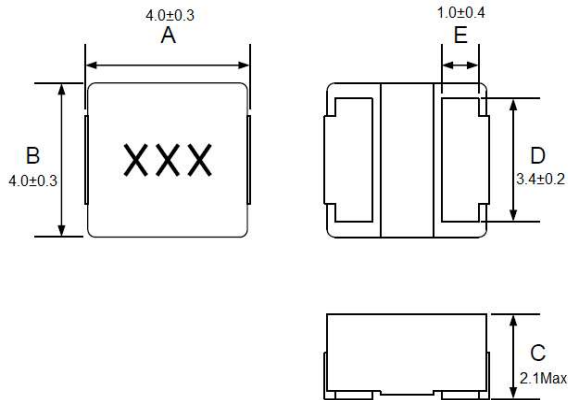


**Temperature Change vs. DC Current**



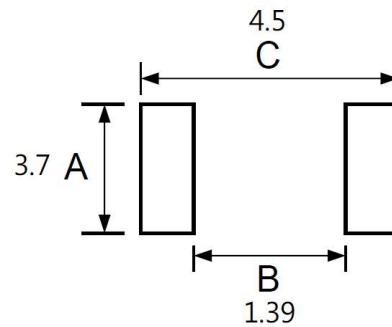
**AMNN00040421 Type**

**Shapes and Dimensions**



unit:mm

**Recommended Land Pattern**



unit:mm

**Electrical Characteristics**

| Part No.           | Inductance (uH) | Test Freq.   | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|--------------|------------------|--------------|--------------|----------------|---------|
| AMNN000404211R0MXG | 1               | 100kHz/0.25V | 11.9             | 5.4          | 11           | 20             | 1R0     |
| AMNN000404211R5MXG | 1.5             | 100kHz/0.25V | 15.8             | 4.6          | 9.1          | 20             | 1R5     |
| AMNN000404212R2MXG | 2.2             | 100kHz/0.25V | 23.5             | 3.7          | 8            | 20             | 2R2     |
| AMNN000404213R3MXG | 3.3             | 100kHz/0.25V | 38.3             | 2.9          | 5.2          | 20             | 3R3     |
| AMNN000404214R7MXG | 4.7             | 100kHz/0.25V | 57.4             | 2.7          | 5            | 20             | 4R7     |

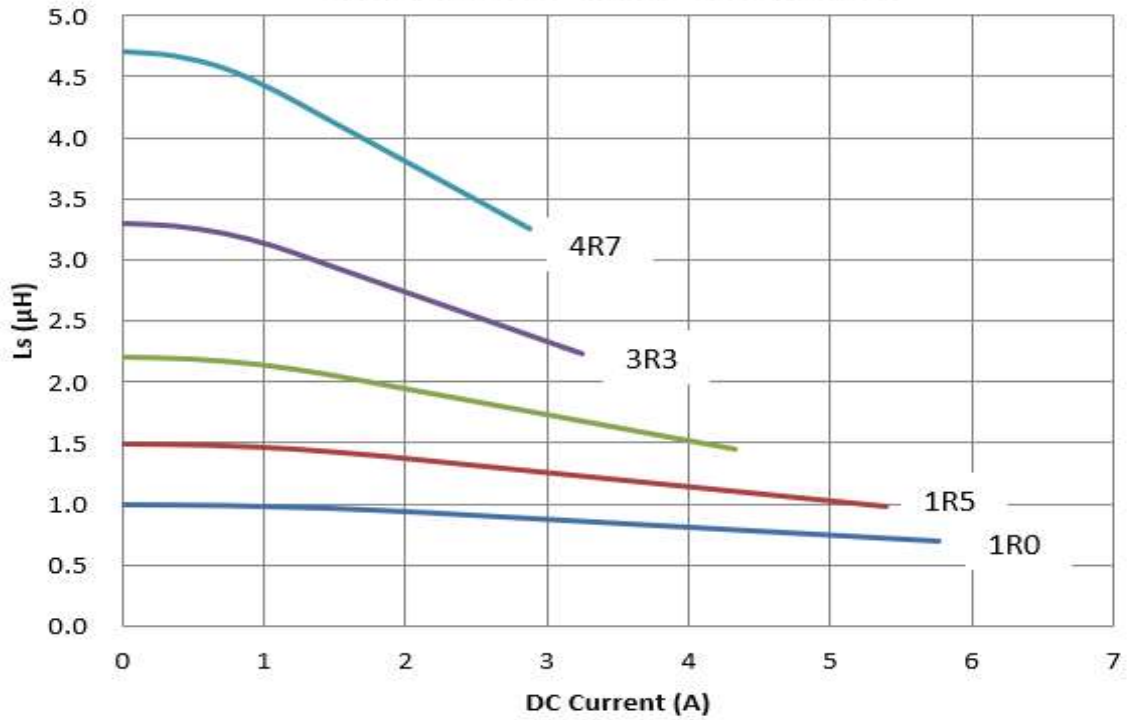
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- Irms for a 40°C temperature rise from 25°C ambient with current

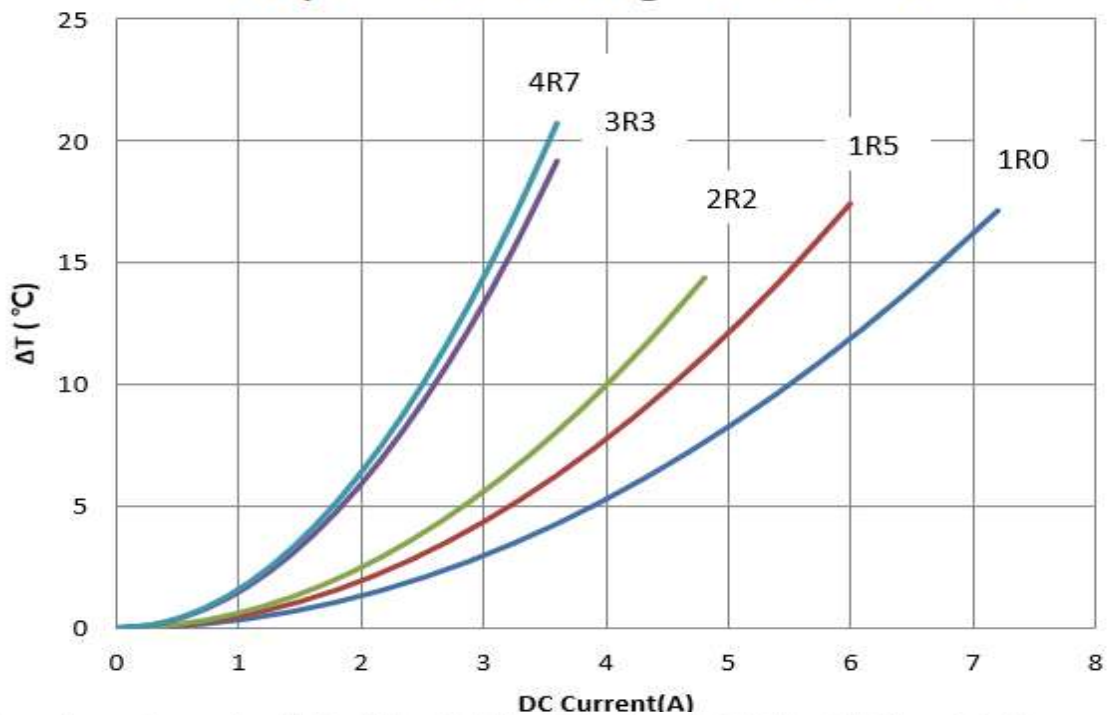
**AMNN00040421 Type**

**■ Characteristics Graph**

**Inductance vs. DC Current**



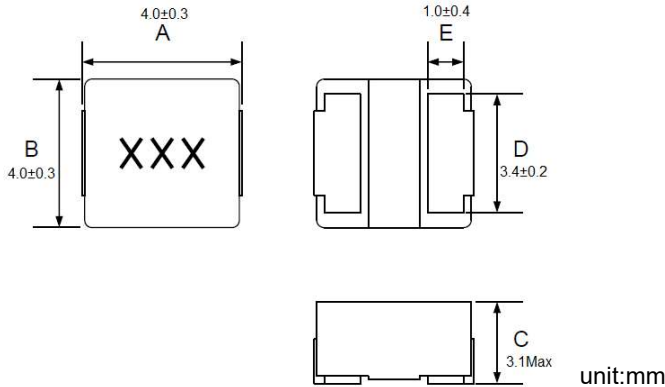
**Temperature Change vs. DC Current**



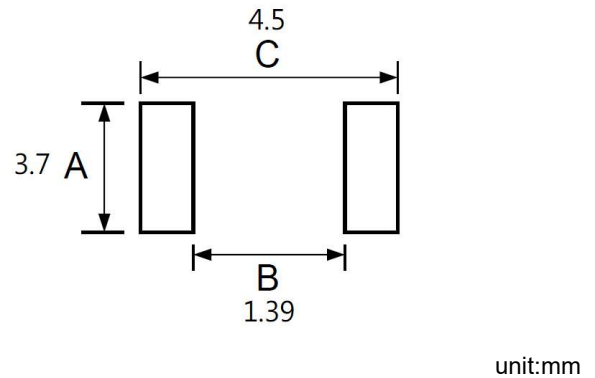
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**AMNI00040431 Type**

**Shapes and Dimensions**



**Recommended Land Pattern**



**Electrical Characteristics**

| Part No.           | Inductance (uH) | Test Freq.   | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|--------------|------------------|--------------|--------------|----------------|---------|
| AMNI000404313R3MXB | 3.3             | 100kHz/0.25V | 29               | 5.5          | 6.6          | 20             | 3R3     |
| AMNI000404314R7MXB | 4.7             | 100kHz/0.25V | 44               | 4.5          | 5.1          | 20             | 4R7     |
| AMNI000404316R8MXB | 6.8             | 100kHz/0.25V | 74               | 3.6          | 3.9          | 20             | 6R8     |

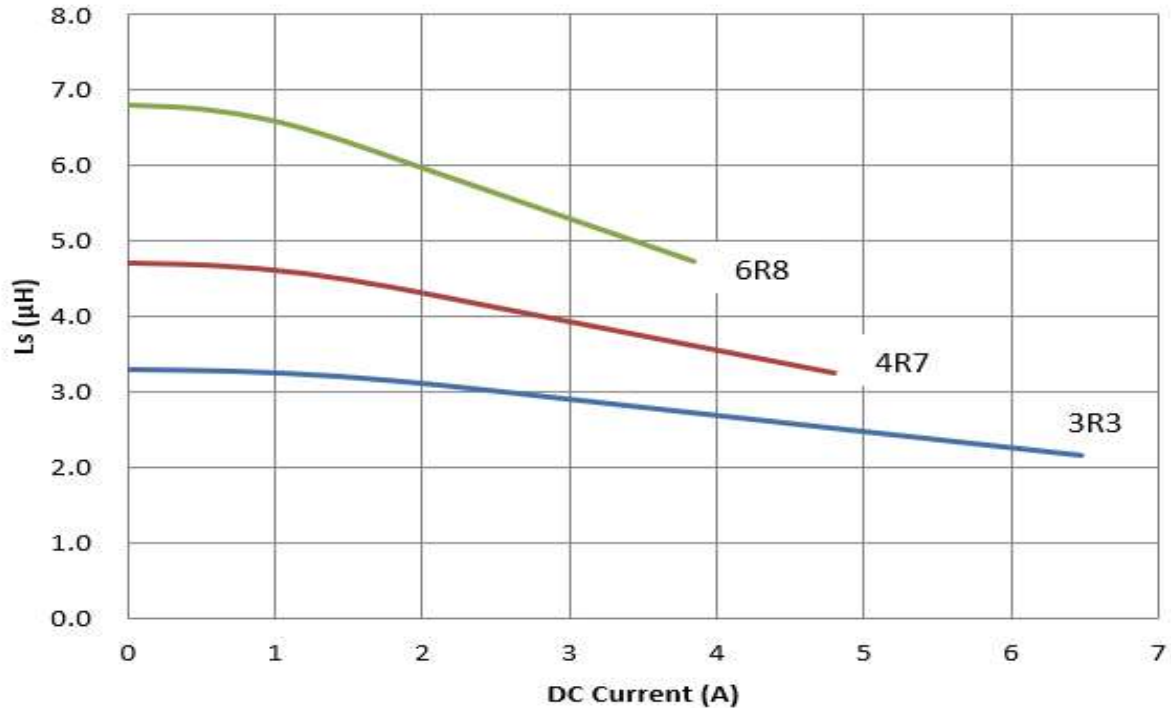
**Note: When ordering, please specify tolerance code. Tolerance: M=±20%**

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- Isat for Inductance drop 30% from its value with current
- I rms for a 40°C temperature rise from 25°C ambient with current

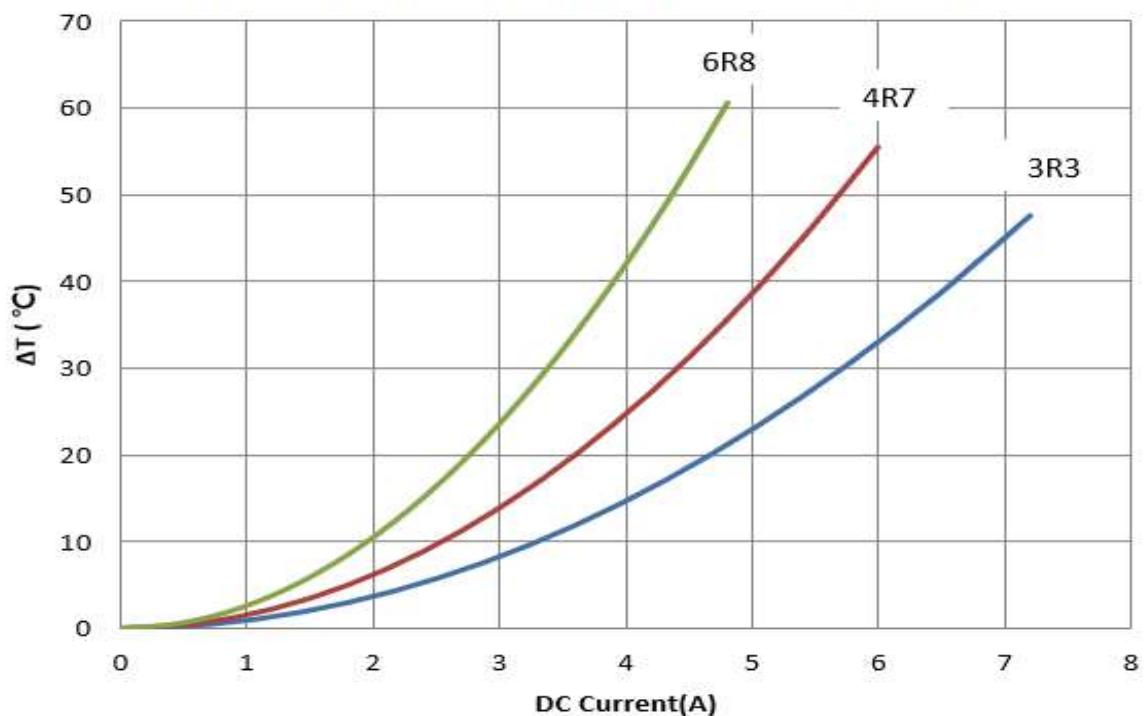
**AMNI00040431 Type**

**■ Characteristics Graph**

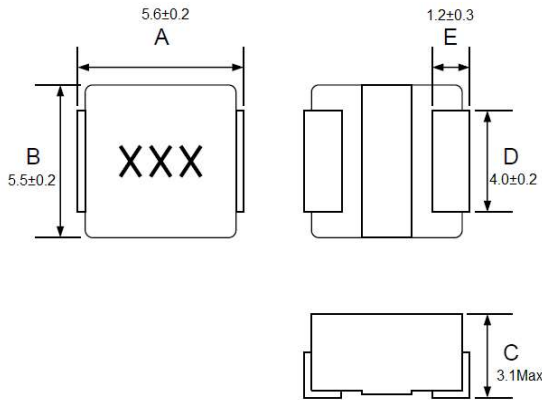
**Inductance vs. DC Current**



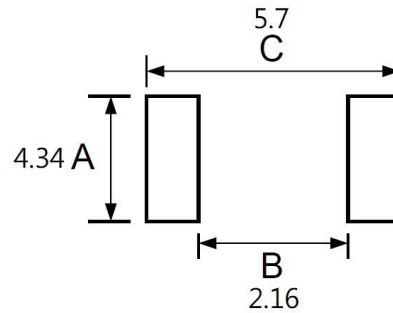
**Temperature Change vs. DC Current**



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**AMNI00050531 Type**
**Shapes and Dimensions**


unit:mm

**Recommended Land Pattern**


unit:mm

**Electrical Characteristics**

| Part No.           | Inductance (uH) | Test Freq.  | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|-------------|------------------|--------------|--------------|----------------|---------|
| AMNI00050531R16MXB | 0.16            | 100kHz/0.5V | 2.36             | 31           | 22.2         | 20             | R16     |
| AMNI00050531R33MXB | 0.33            | 100kHz/0.5V | 3.52             | 26           | 19.2         | 20             | R33     |
| AMNI00050531R60MXB | 0.6             | 100kHz/0.5V | 4.52             | 19.8         | 17.7         | 20             | R60     |
| AMNI00050531R80MXB | 0.8             | 100kHz/0.5V | 5.65             | 18.5         | 13           | 20             | R80     |
| AMNI00050531R0MXB  | 1               | 100kHz/0.5V | 9.4              | 14           | 11.1         | 20             | 1R0     |
| AMNI000505312R2MXB | 2.2             | 100kHz/0.5V | 14.5             | 9.2          | 9.7          | 20             | 2R2     |
| AMNI000505313R3MXB | 3.3             | 100kHz/0.5V | 23.3             | 8.7          | 8.1          | 20             | 3R3     |
| AMNI000505314R7MXB | 4.7             | 100kHz/0.5V | 40               | 6.7          | 5.9          | 20             | 4R7     |

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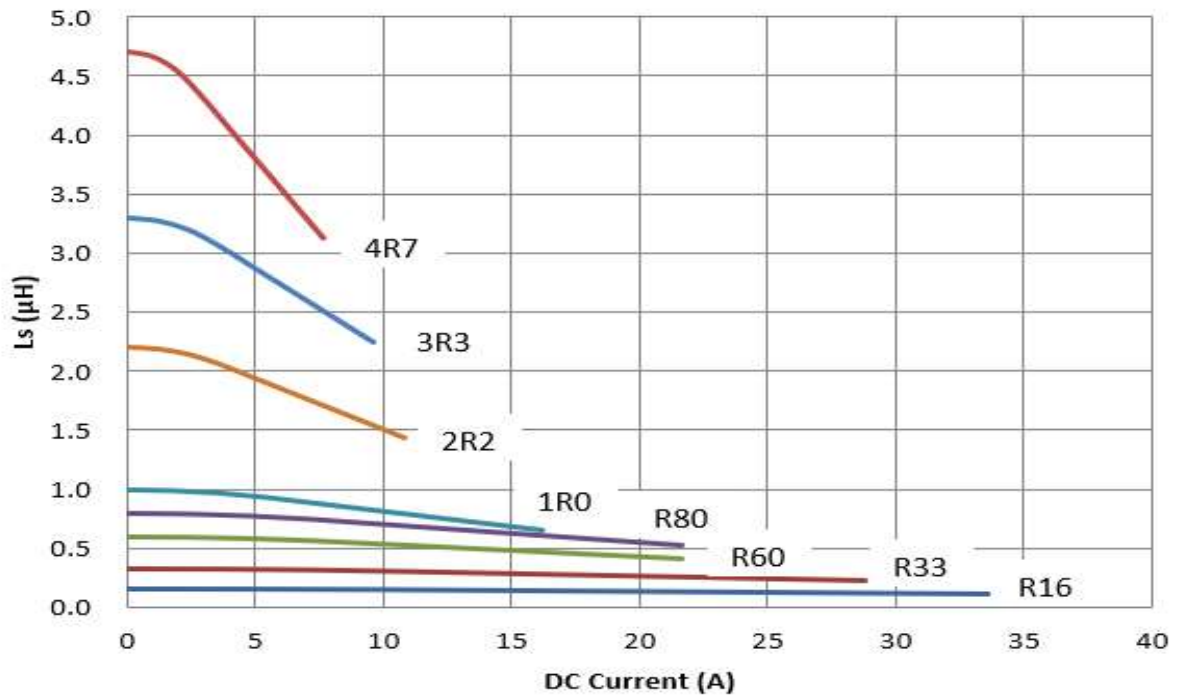
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- Isat for Inductance drop 30% from its value with current
- I rms for a 40°C temperature rise from 25°C ambient with current



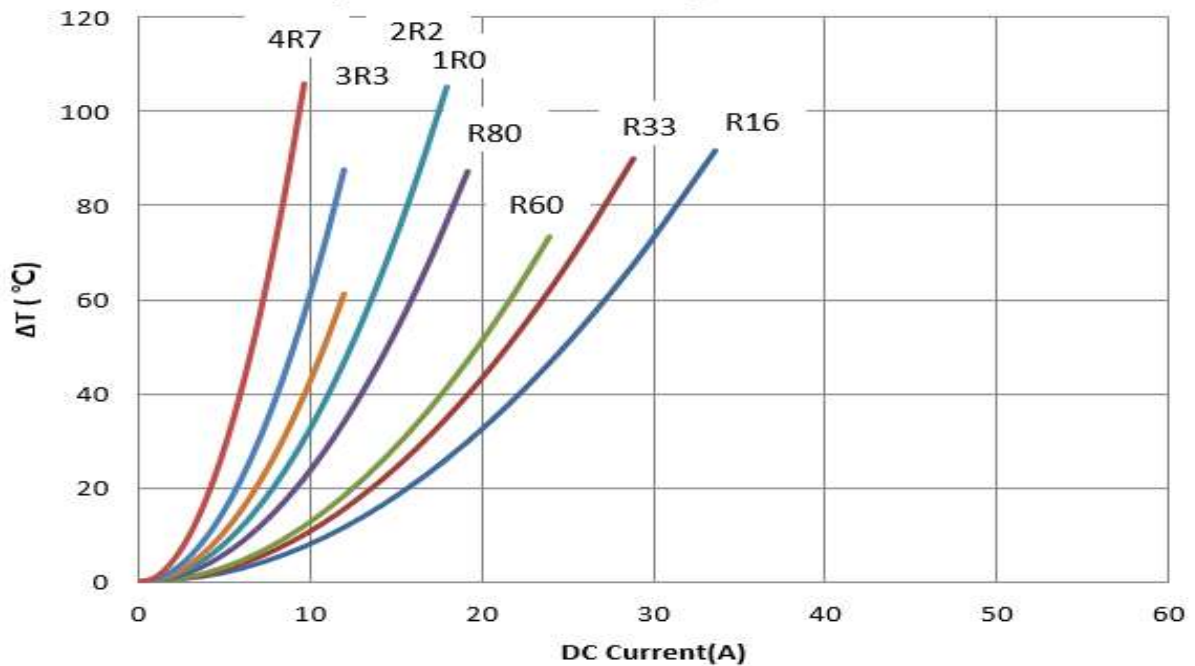
**AMNI00050531 Type**

**■ Characteristics Graph**

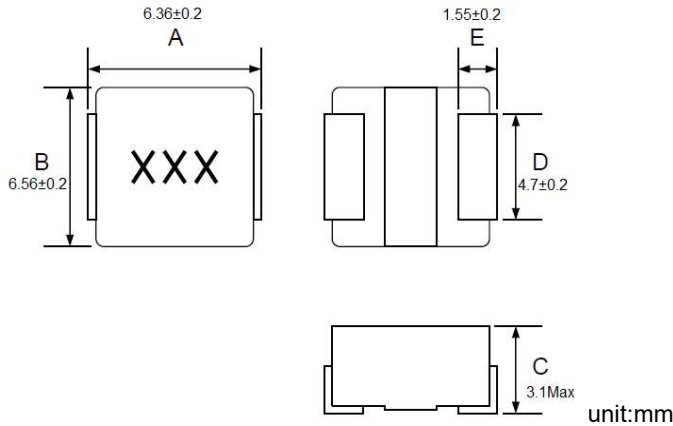
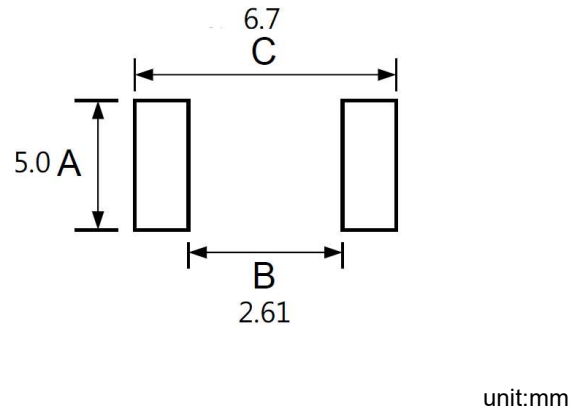
**Inductance vs. DC Current**



**Temperature Change vs. DC Current**



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**AMNI00060631 Type**
**Shapes and Dimensions**

**Recommended Land Pattern**

**Electrical Characteristics**

| Part No.            | Inductance (uH) | Test Freq.   | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|---------------------|-----------------|--------------|------------------|--------------|--------------|----------------|---------|
| AMNI00060631R18MXB  | 0.18            | 100kHz/0.25V | 1.75             | 39           | 32           | 20             | R18     |
| AMNI00060631R33MXB  | 0.33            | 100kHz/0.25V | 2.53             | 30           | 25           | 20             | R33     |
| AMNI00060631R56MXB  | 0.56            | 100kHz/0.25V | 3.31             | 29           | 22           | 20             | R56     |
| AMNI00060631R0MXB   | 1.0             | 100kHz/0.25V | 6.18             | 23           | 18           | 20             | 1R0     |
| AMNI00060631R2MXB   | 1.2             | 100kHz/0.25V | 7.5              | 22           | 16           | 20             | 1R2     |
| AMNI00060631R8MXB   | 1.8             | 100kHz/0.25V | 10.52            | 18.2         | 14           | 20             | 1R8     |
| AMNI00060631R2R2MXB | 2.2             | 100kHz/0.25V | 13.97            | 15.9         | 10           | 20             | 2R2     |
| AMNI00060631R3R3MXB | 3.3             | 100kHz/0.25V | 20.81            | 12.2         | 8            | 20             | 3R3     |

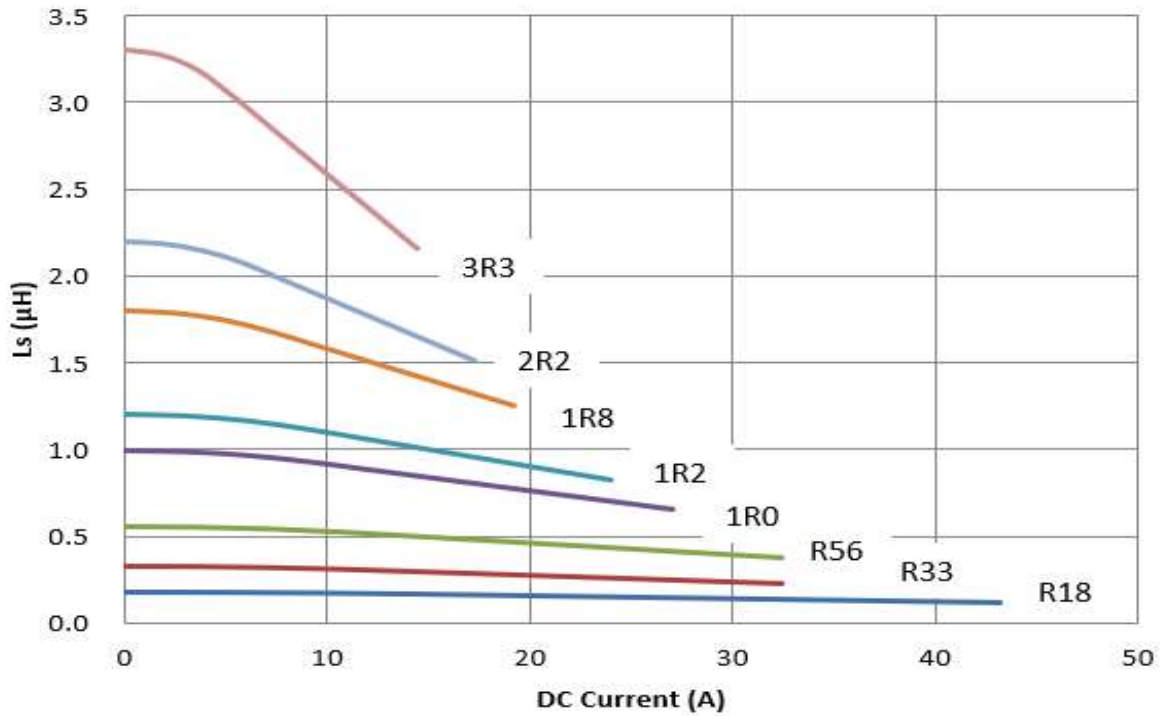
**Note: When ordering, please specify tolerance code. Tolerance: M=±20%**

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- Isat for Inductance drop 30% from its value with current
- I rms for a 40°C temperature rise from 25°C ambient with current

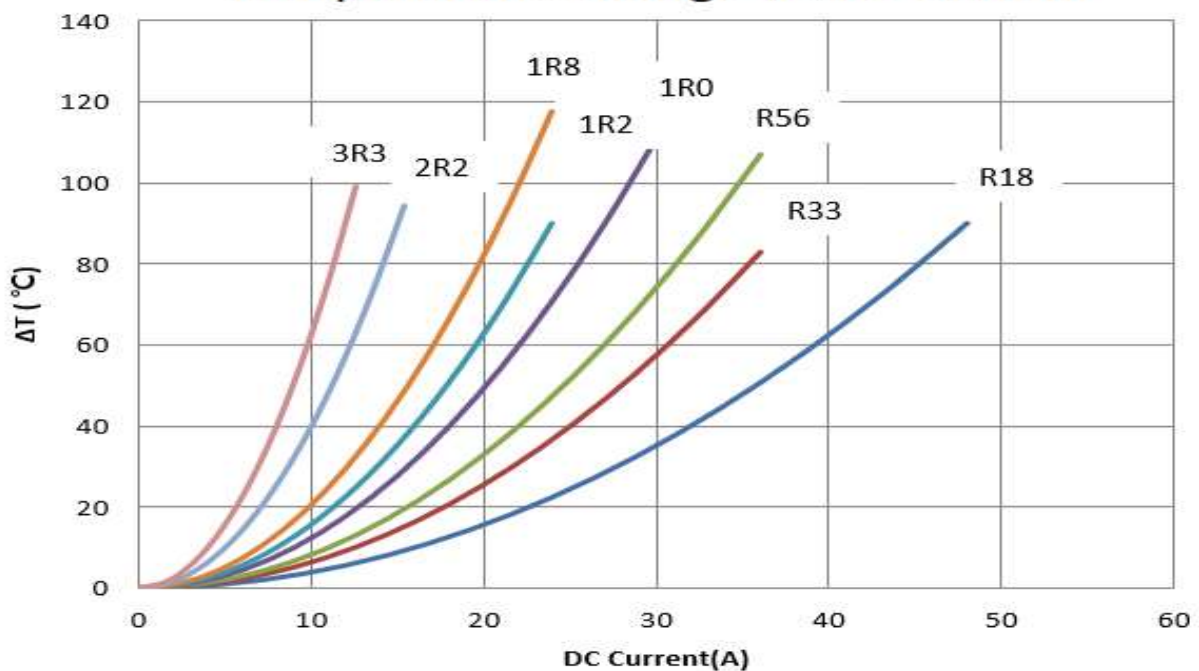
**AMNI00060631 Type**

**Characteristics Graph**

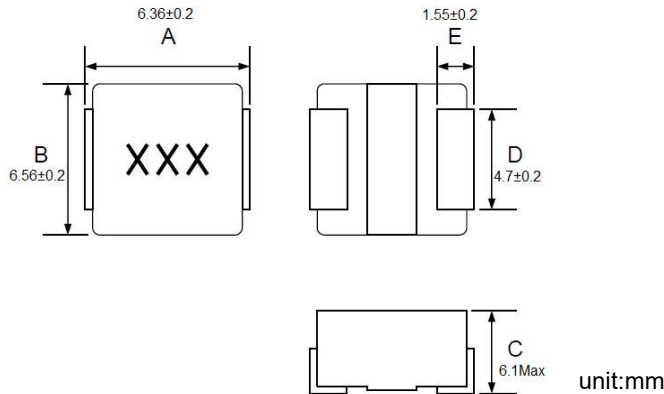
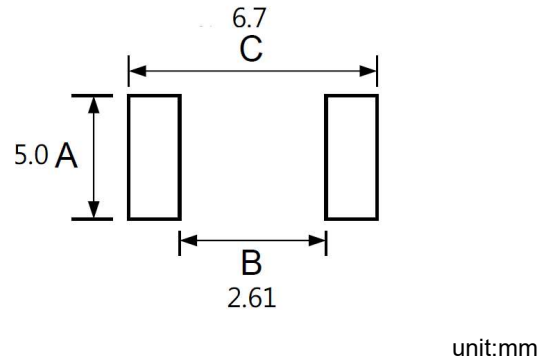
**Inductance vs. DC Current**



**Temperature Change vs. DC Current**



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**AMNI00060661 Type**
**Shapes and Dimensions**

**Recommended Land Pattern**

**Electrical Characteristics**

| Part No.           | Inductance (uH) | Test Freq.   | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|--------------|------------------|--------------|--------------|----------------|---------|
| AMNI000606614R7MXB | 4.7             | 100kHz/0.25V | 14.4             | 10.5         | 11           | 20             | 4R7     |
| AMNI000606615R6MXB | 5.6             | 100kHz/0.25V | 15.9             | 9.9          | 10           | 20             | 5R6     |
| AMNI000606616R8MXB | 6.8             | 100kHz/0.25V | 20.8             | 9.2          | 9            | 20             | 6R8     |
| AMNI000606618R2MXB | 8.2             | 100kHz/0.25V | 26.4             | 8.4          | 8            | 20             | 8R2     |
| AMNI00060661100MXB | 10              | 100kHz/0.25V | 29.82            | 7.6          | 7            | 20             | 100     |
| AMNI00060661150MXB | 15              | 100kHz/0.25V | 43.75            | 5.8          | 6            | 20             | 150     |
| AMNI00060661220MXB | 22              | 100kHz/0.25V | 60.63            | 5.6          | 5            | 20             | 220     |

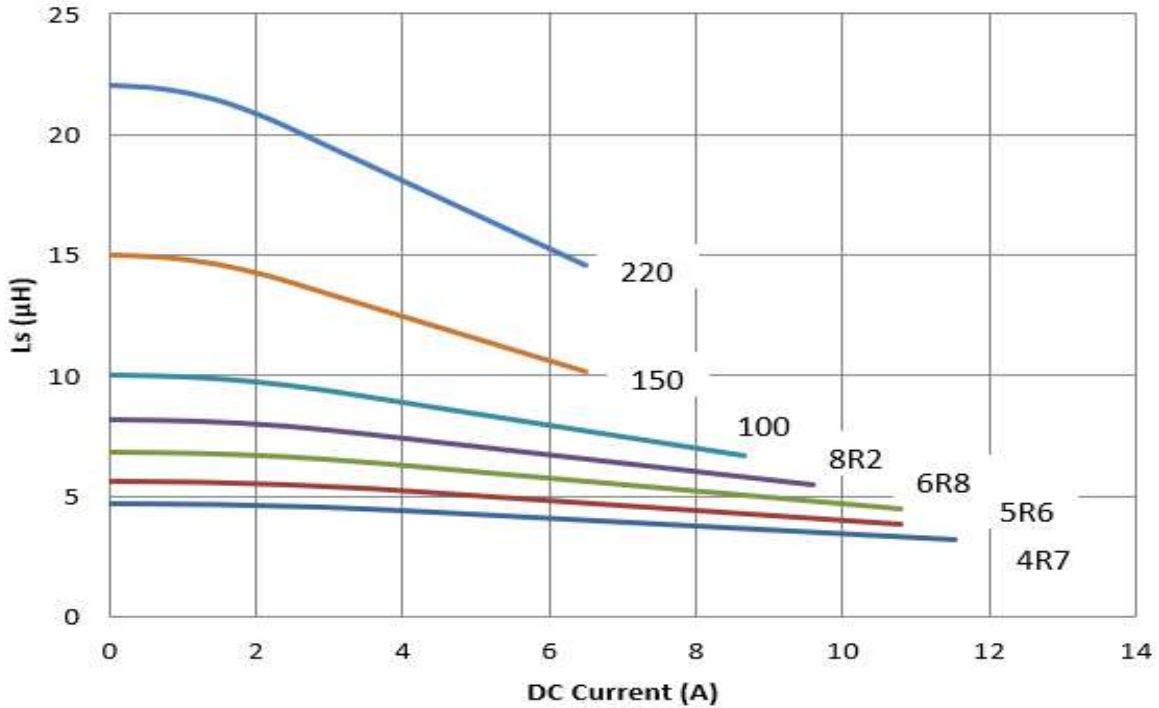
**Note: When ordering, please specify tolerance code. Tolerance: M=±20%**

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- Isat for Inductance drop 30% from its value with current
- Irms for a 40°C temperature rise from 25°C ambient with current

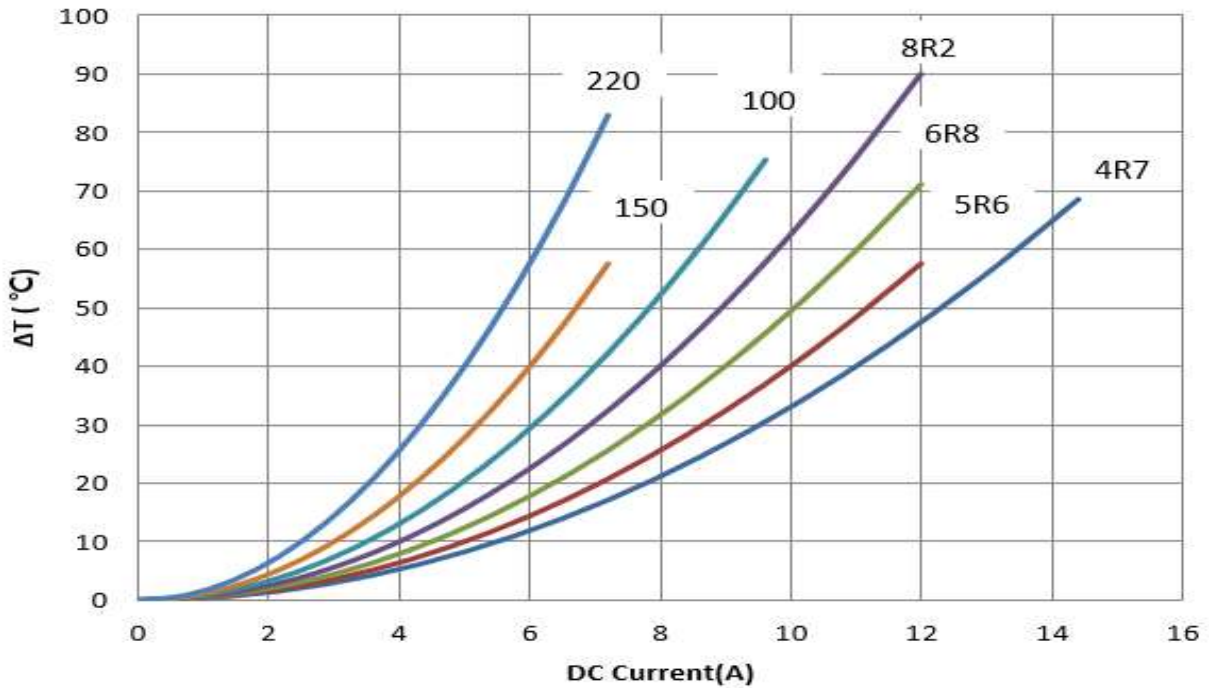
**AMNI00060661 Type**

**■ Characteristics Graph**

**Inductance vs. DC Current**

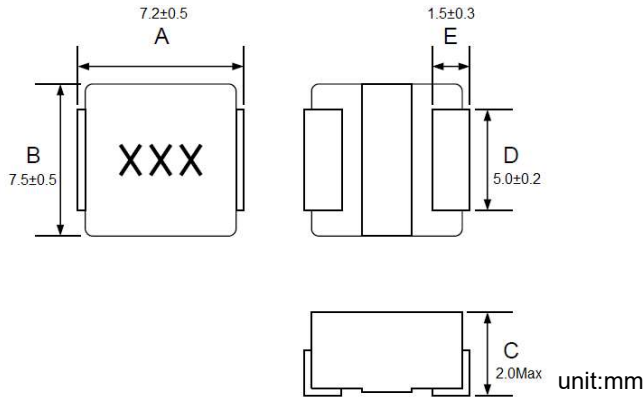


**Temperature Change vs. DC Current**

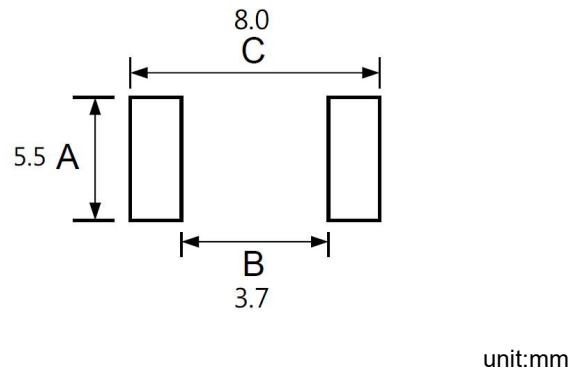


**AMNI00070720 Type**

■ **Shapes and Dimensions**



■ **Recommended Land Pattern**



■ **Electrical Characteristics**

| Part No.           | Inductance (uH) | Test Freq.   | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|--------------|------------------|--------------|--------------|----------------|---------|
| AMNI000707201R5MXB | 1.5             | 100kHz/0.25V | 19.3             | 15           | 9            | 20             | 1R5     |
| AMNI000707202R2MXB | 2.2             | 100kHz/0.25V | 27.5             | 11.2         | 7            | 20             | 2R2     |

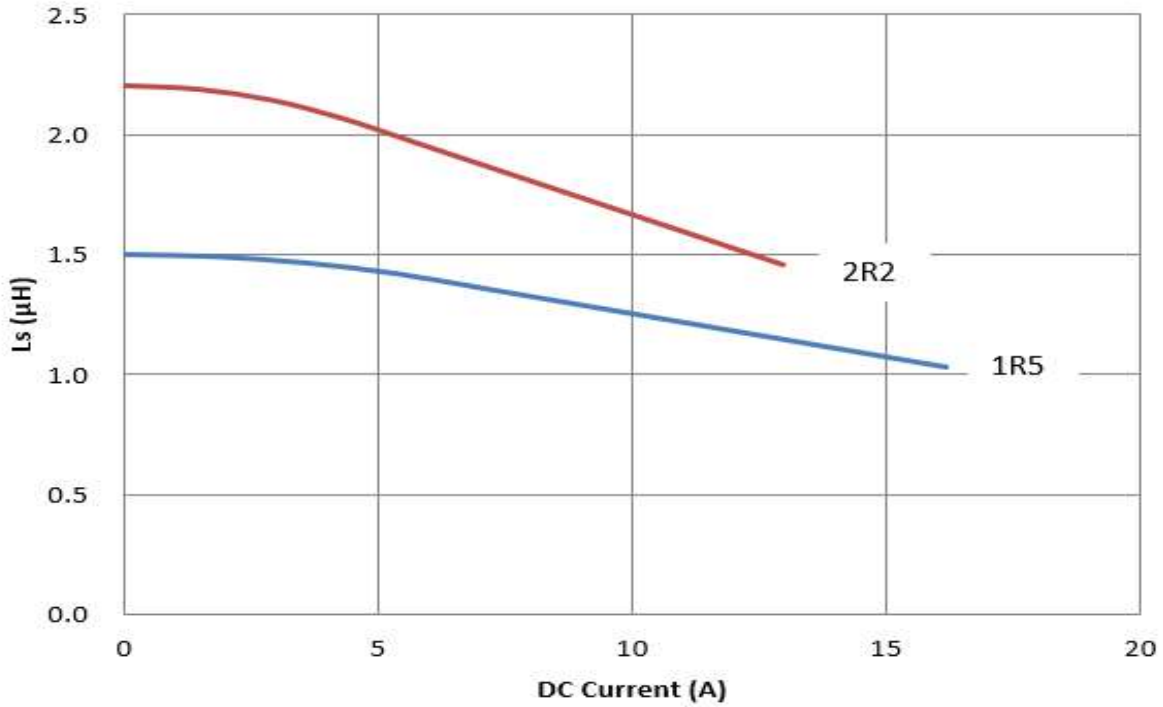
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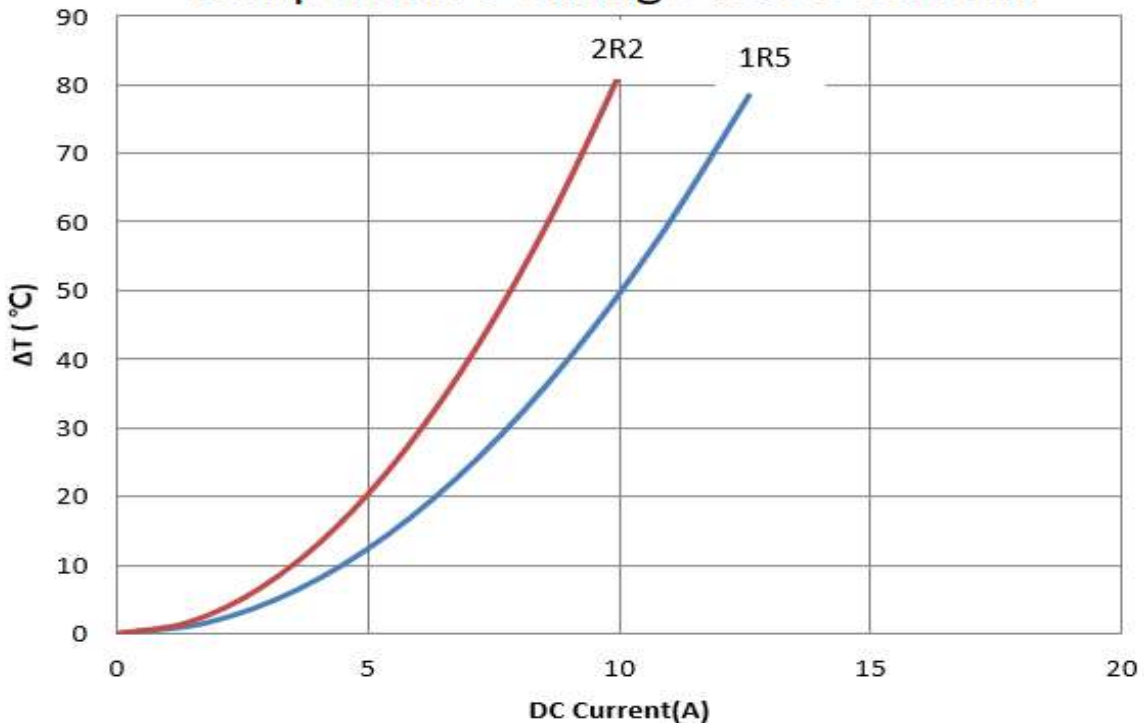
**AMNI00070720 Type**

**■ Characteristics Graph**

**Inductance vs. DC Current**



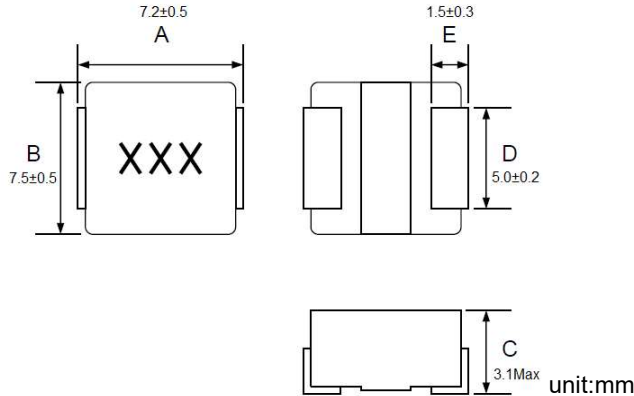
**Temperature Change vs. DC Current**



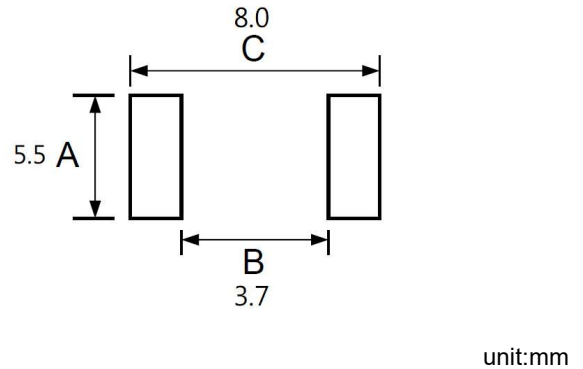
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**AMNI00070731 Type**

■ **Shapes and Dimensions**



■ **Recommended Land Pattern**



■ **Electrical Characteristics**

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|--------------------|-----------------|--------------|------------------|--------------|--------------|----------------|---------|
| AMNI000707311R0MXB | 1               | 100kHz/0.25V | 5                | 28           | 21.8         | 20             | 1R0     |
| AMNI000707311R5MXB | 1.5             | 100kHz/0.25V | 8.36             | 23.5         | 15           | 20             | 1R5     |
| AMNI000707312R2MXB | 2.2             | 100kHz/0.25V | 15.07            | 18           | 12.9         | 20             | 2R2     |
| AMNI000707312R7MXB | 2.7             | 100kHz/0.25V | 17.3             | 12.8         | 11.4         | 20             | 2R7     |
| AMNI000707313R3MXB | 3.3             | 100kHz/0.25V | 21.45            | 12.3         | 10           | 20             | 3R3     |
| AMNI000707314R7MXB | 4.7             | 100kHz/0.25V | 30               | 10.1         | 9            | 20             | 4R7     |
| AMNI000707316R8MXB | 6.8             | 100kHz/0.25V | 42.57            | 8.7          | 6.8          | 20             | 6R8     |

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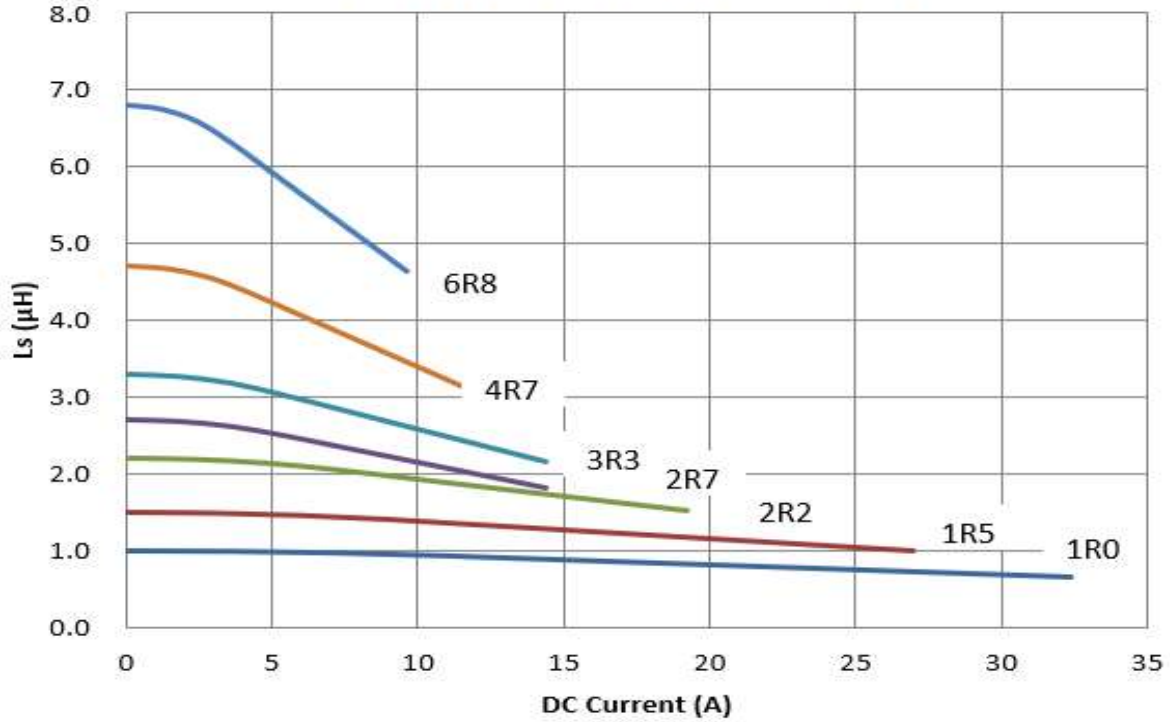
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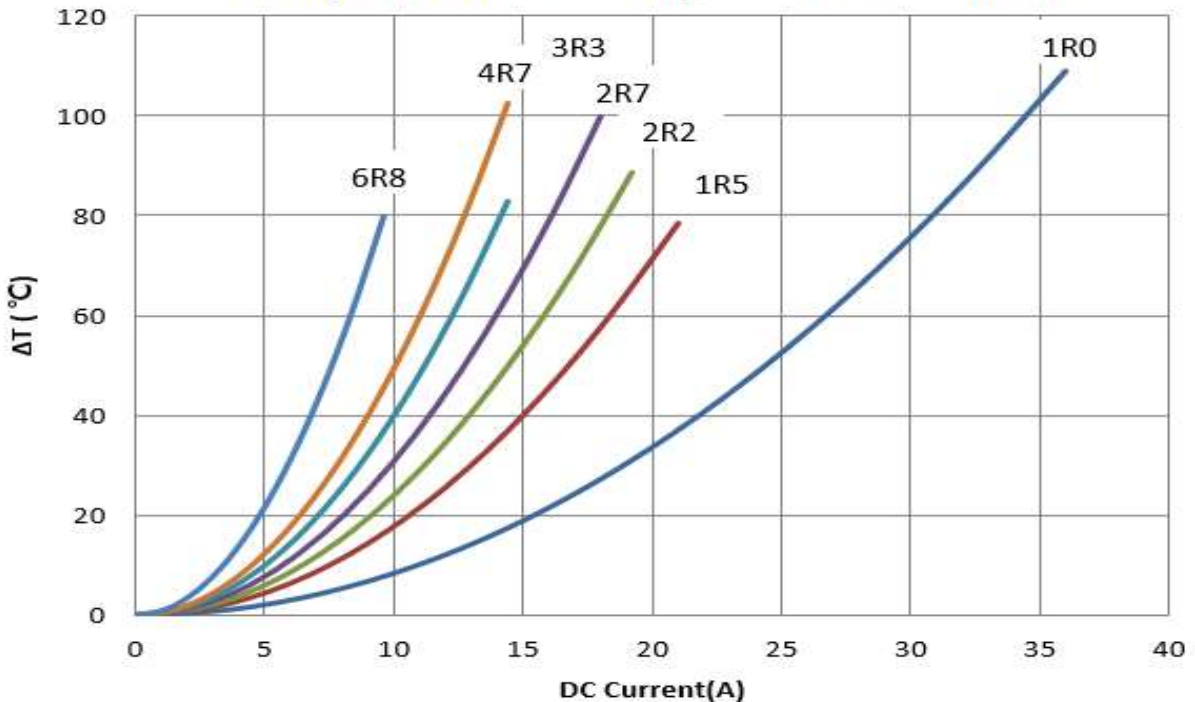
**AMNI00070731 Type**

**■ Characteristics Graph**

**Inductance vs. DC Current**



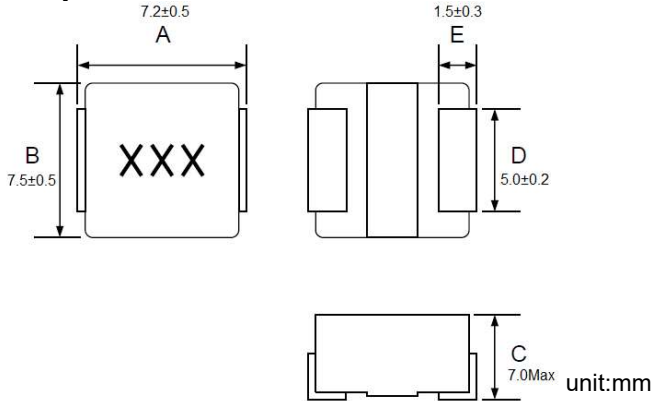
**Temperature Change vs. DC Current**



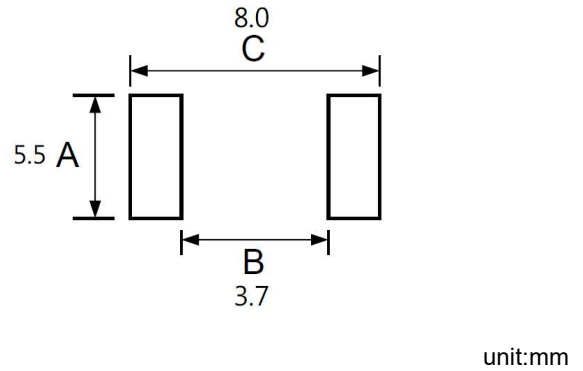
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**AMNI00070770 Type**

■ **Shapes and Dimensions**



■ **Recommended Land Pattern**



■ **Electrical Characteristics**

| Part No.           | Inductance (uH) | Test Freq.   | RDC(mΩ) Max(Typ) | Isat (A)Typ. | Irms (A)Typ. | Tolerance (±%) | Marking |
|--------------------|-----------------|--------------|------------------|--------------|--------------|----------------|---------|
| AMNI000707703R3MXB | 3.3             | 100kHz/0.25V | 9.42             | 19.4         | 15.1         | 20             | 3R3     |
| AMNI000707704R7MXB | 4.7             | 100kHz/0.25V | 14.26            | 15.2         | 13.6         | 20             | 4R7     |
| AMNI000707705R6MXB | 5.6             | 100kHz/0.25V | 15               | 13           | 11.4         | 20             | 5R6     |

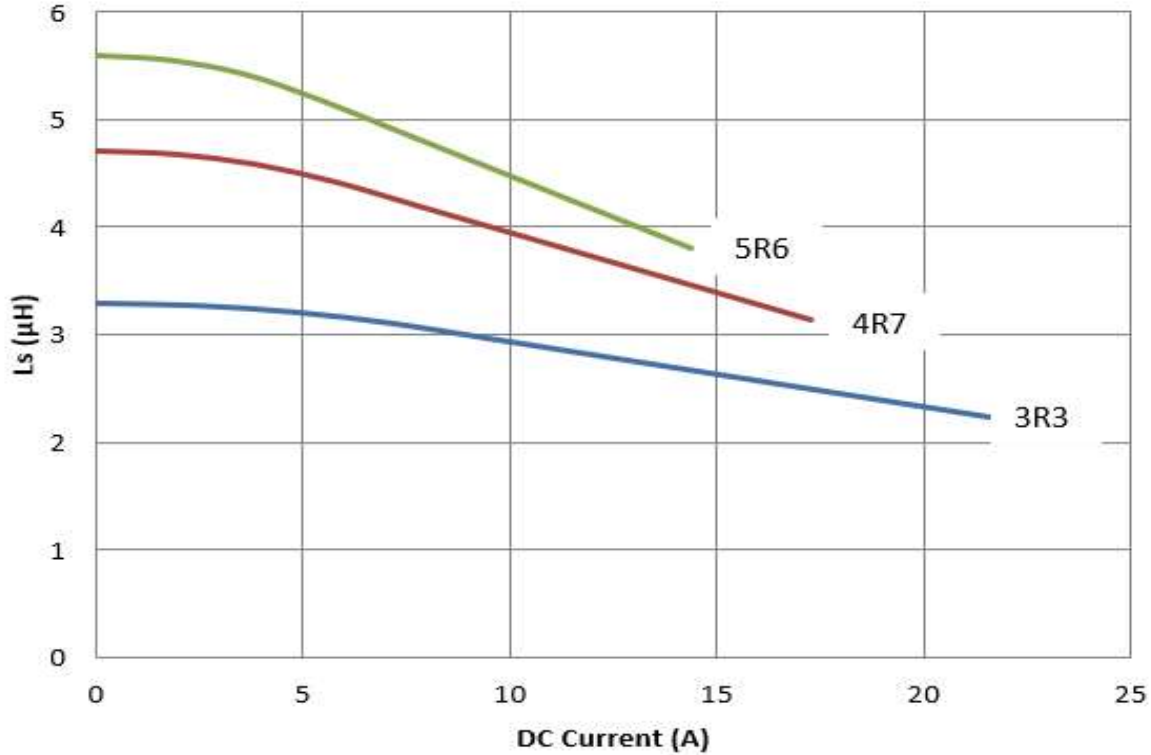
**Note: When ordering, please specify tolerance code. Tolerance: M=±20%**

- Operating temperature range – 55°C ~ 125°C (Including self - temperature rise)
- Isat for Inductance drop 30% from its value with current
- I rms for a 40°C temperature rise from 25°C ambient with current

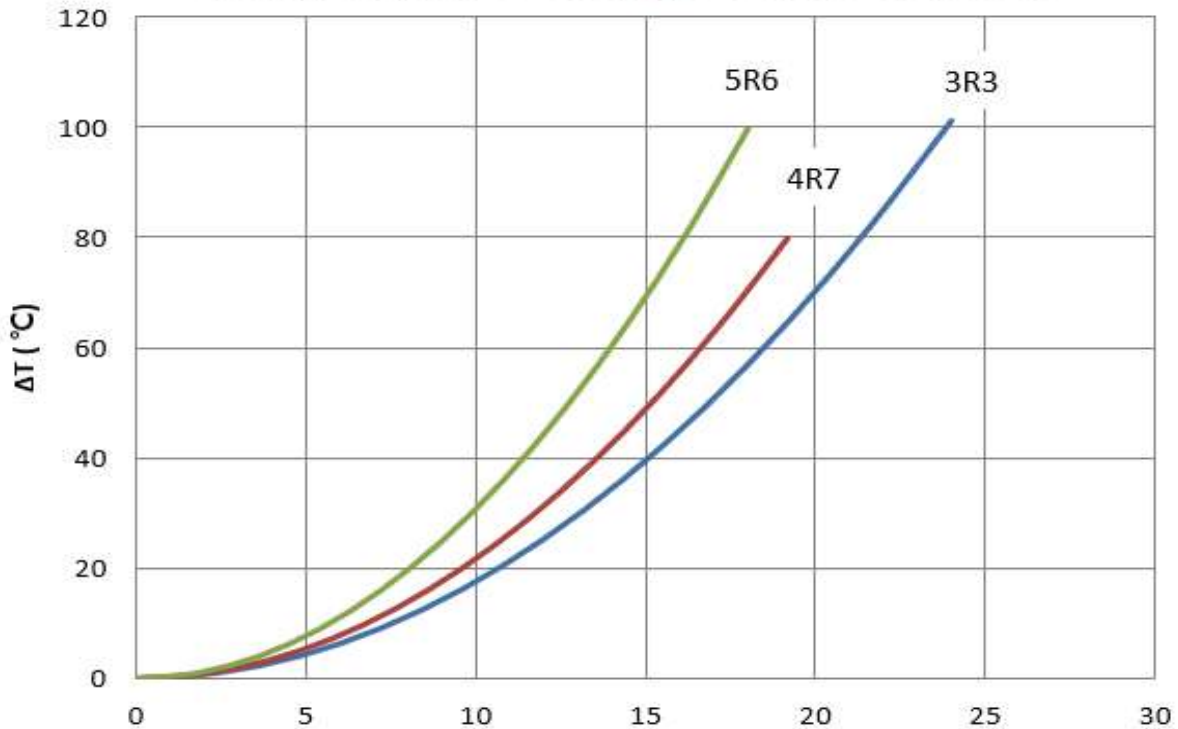
**AMNI00070770 Type**

**■ Characteristics Graph**

**Inductance vs. DC Current**

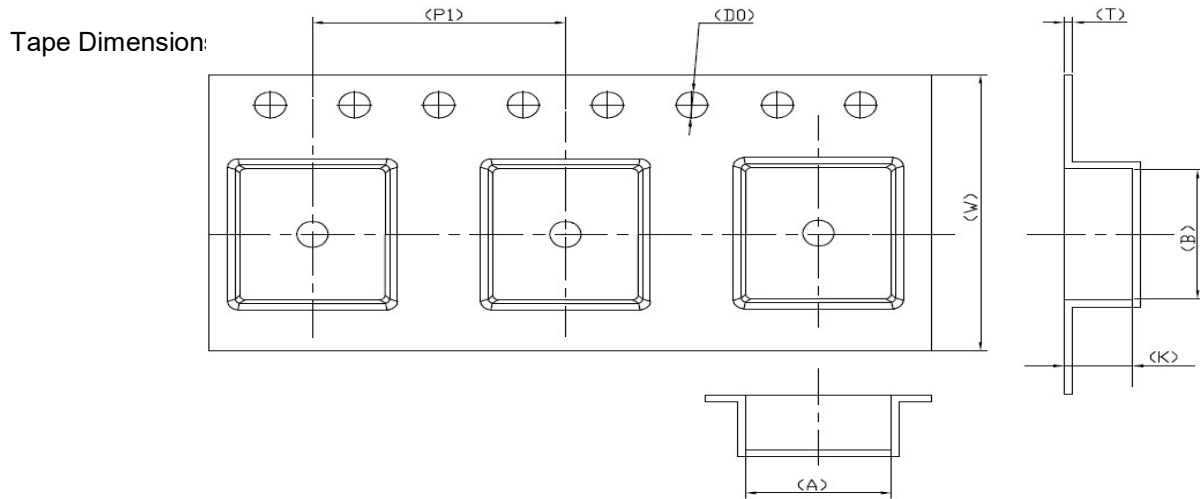


**Temperature Change vs. DC Current**

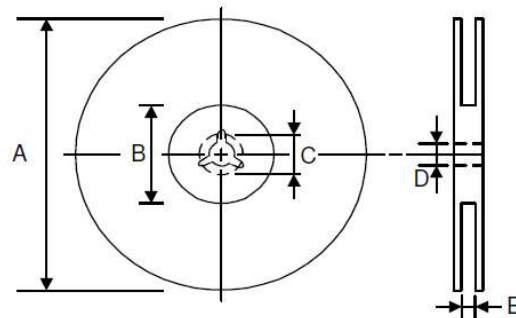


Please be sure to request approval specifications that provide further details of the products. Kindly note that the content of these specifications are subject to change or may be discontinued without prior notice. This product may not be designed/used in medical or high risk applications without Chilisin approval. Please contact our sales department before ordering.

**■ Packaging**



**Reel Dimensions**



**Dimensions in mm**

| TYPE         | Tape Dimensions |      |     |     |    |      |    | Reel Dimensions |     |      |    |      | Quantity<br>PCS / REEL |
|--------------|-----------------|------|-----|-----|----|------|----|-----------------|-----|------|----|------|------------------------|
|              | A               | B    | K   | D0  | W  | T    | P1 | A               | B   | C    | D  | E    |                        |
| AMNI00040421 | 4.3             | 4.4  | 2.4 | 1.5 | 12 | 0.35 | 8  | 330             | 100 | 21.5 | 13 | 12.4 | 2000                   |
| AMNN00040421 | 4.3             | 4.4  | 2.4 | 1.5 | 12 | 0.35 | 8  | 330             | 100 | 21.5 | 13 | 12.4 | 2000                   |
| AMNI00040431 | 4.3             | 4.4  | 3.5 | 1.5 | 12 | 0.35 | 8  | 330             | 100 | 21.5 | 13 | 12.4 | 2000                   |
| AMNI00050531 | 6               | 6.1  | 3.3 | 1.5 | 12 | 0.35 | 8  | 330             | 100 | 21.5 | 13 | 12.4 | 1000                   |
| AMNI00060631 | 6.8             | 6.56 | 3.4 | 1.5 | 16 | 0.35 | 12 | 330             | 100 | 21.5 | 13 | 16.4 | 1000                   |
| AMNI00060661 | 6.8             | 7    | 6.3 | 1.5 | 16 | 0.4  | 12 | 330             | 100 | 21.5 | 13 | 16.4 | 500                    |
| AMNI00070720 | 8.2             | 7.9  | 2.3 | 1.5 | 16 | 0.3  | 12 | 330             | 100 | 21.5 | 13 | 16.4 | 1000                   |
| AMNI00070731 | 8.2             | 7.9  | 3.4 | 1.5 | 16 | 0.35 | 12 | 330             | 100 | 21.5 | 13 | 16.4 | 1000                   |
| AMNI00070770 | 8.2             | 7.9  | 7.3 | 1.5 | 24 | 0.4  | 16 | 330             | 100 | 21.5 | 13 | 24.2 | 300                    |